

REMARKS

I. Introduction

Claims 15 to 19 and 21 to 29 are pending in the present application. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

II. Specification

Regarding the Specification, the Examiner's attention is respectfully directed to M.P.E.P. § 1893.03(c), which states:

Note: a national stage application submitted under 35 U.S.C. 371 may **not** claim benefit of the filing date of the international application of which it is the national stage since its filing date is the international filing date of the international application. . . . Stated differently, since the international application is not an earlier application (it has the same filing date as the national stage), a benefit claim under 35 U.S.C. 120 in the national stage to the international application is **inappropriate** and may result in the submission being treated as an application filed under 35 U.S.C. 111(a). . . . Accordingly, **it is not necessary for the applicant to amend the first sentence(s) of the specification to reference the international application number** that was used to identify the application during international processing of the application by the international authorities prior to commencement of the national stage. (Emphasis added).

Accordingly, it is respectfully maintained that the suggested amendment to the Specification is unnecessary.

III. Rejection of Claims 15 to 19, 21, and 29 Under 35 U.S.C. § 103(a)

Claims 15 to 21 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 4,782,320 ("Shier"). It is respectfully submitted that Shier does not render unpatentable the present claims for at least the following reasons.

Claim 15, as presented, relates to a method for adjusting an electrical resistance of a resistor run running in meandering windings and situated between two layers, the method including, *inter alia*, the features of adjusting the electrical resistance to a specified value, and cutting open the burn-up segments by sending

energy-controlled current pulses through the burn-up segments, wherein circuit traces are routed to connecting locations of the burn-up segments and the meandering windings, and wherein for cutting open a burn-up segment, the current pulse is injected into the two circuit traces that are routed to a selected burn-up segment.

Shier does not disclose, or even suggest, all of the claimed features of claim 15, as presented. As noted in the "Response" submitted on June 23, 2008, Shier merely indicates cutting resistor elements using a beam of radiation from a laser (Shier, col. 2, lines 21 to 23; col. 2, lines 31 to 34; col. 3, lines 32 to 37; and col. 5, lines 12 to 17) and Shier, at col. 1, line 63, mentions merely a current pulse to blow open metal shorts. As further noted, nowhere does Shier disclose, or suggest, how the current pulse is to be applied to the metal shorts or how it is to be ensured that the current pulse cuts open a selected metal short in a targeted manner and not a different metal short or another part of the resistor track. In response to this argument, the Final Office Action admits that Shier does not disclose routing the current pulses to selected burn-up segments (Office Action, p. 3), but conclusorily contends that "it would be obvious to one of ordinary skill in the art at the time the invention was made to apply the cutting of the burn-up segments by electrical current pulses...which therefore requires interconnection to circuit traces to conduct current pulses to its target." (Office Action, pages 3 and 8). However, nowhere does the Office Action explain, or does Shier disclose or suggest, how the current pulse is to be applied to the metal shorts or how it is to be ensured that the current pulse cuts open a selected metal short in a targeted manner and not a different metal short or another part of the resistor track. Nowhere does Shier disclose these features of the application of the current pulse in a targeted manner, as provided for in the context of claim 15, as presented. Therefore, Shier does not disclose, or even suggest, the features of cutting open the burn-up segments by sending energy-controlled current pulses through the burn-up segments, wherein circuit traces are routed to connecting locations of the burn-up segments and the meandering windings, and wherein for cutting open a burn-up segment, the current pulse is injected into the two circuit traces that are routed to a selected burn-up segment.

Accordingly, it is respectfully submitted that Shier does not disclose, or even suggest, all of the features included in claim 15, as presented. Therefore, it is

respectfully submitted that Shier does not render unpatentable the presently pending claims for at least the foregoing reasons.

As for claims 16 to 19, and 21, which ultimately depend from and therefore include all of the features included in claim 15, it is respectfully submitted that Shier does not render unpatentable these dependent claims for at least the reasons more fully set forth above.

Claim 29, as presented, relates to a method for adjusting an electrical resistance of a resistor run running in meandering windings and situated between two layers, the method including, *inter alia*, the features of cutting open the burn-up segments by sending energy-controlled current pulses through the burn-up segments, and before the cutting open of a selected burn-up segment, heating locally the selected burn-up segment, whereby a specific resistance of the selected burn-up segment is increased locally during the current pulse.

Shier does not disclose, or even suggest, all of the claimed features of claim 29, as presented. Shier merely indicates that the resistive links are shorted by metal and that the metal shorts are blow open with a current pulse or laser beam (Shier, col. 1, lines 60 to 63). Nowhere does Shier disclose heating locally the selected burn-up segment, before the cutting open of a selected burn-up segment, whereby a specific resistance of the selected burn-up segment is increased locally during the current pulse. Cutting open a burn-up segment using a laser beam ensues via the thermal effect of the laser beam and via melting and vaporizing of the burn-up segment. In contrast, the present application, for example, provides that the selected burn-up segment is first heated locally by a laser beam, the specific resistance of the burn-up segment increasing without material removal. Because the power accruing on the burn-up segment during the subsequent current pulse is, according to Ohm's law, a product of the square of the flowing current and the resistance, the selected burn-up segment is heated particularly strongly by the current pulse as a result of the locally increased resistance and is thus cut open safely and in a targeted manner. Shier does not disclose using a combination of a current pulse and a laser beam to cut open burn-up segments. Even if it is assumed, *arguendo*, that Shier does disclose a combination of a current pulse and a laser beam to cut open the burn-up segments, it would only mean trying to additively superpose the heating by the current pulse with the heating by the laser beam; Shier would not, however, disclose initially heating the selected burn-up segment locally,

whereby the specific resistance of the burn-up segment is increased locally during the current pulse. Further, Shier does not disclose using a material having a positive temperature coefficient of the electric resistance for the burn-up segment.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

IV. Rejection of Claims 22, and 24 to 28 Under 35 U.S.C. § 103(a)

Claims 22, and 24 to 28 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Shier and U.S. Patent No. 5,844,122 ("Kato"). It is respectfully submitted that the combination of Shier and Kato does not render unpatentable the present claims for at least the following reasons.

Claims 22, and 24 to 28 ultimately depend from claim 15, as presented. As more fully set forth above, Shier does not disclose, or even suggest, the features of cutting open the burn-up segments by sending energy-controlled current pulses through the burn-up segments, wherein circuit traces are routed to connecting locations of the burn-up segments and the meandering windings, and wherein for cutting open a burn-up segment, the current pulse is injected into the two circuit traces that are routed to a selected burn-up segment. Since Kato merely indicates trimming a potentiometric resistor or a serial resistor by a laser (Kato, col. 3, lines 42 to 65), Kato also does not disclose, or even suggest, the features of cutting open the burn-up segments by sending energy-controlled current pulses through the burn-up segments, wherein circuit traces are routed to connecting locations of the burn-up segments and the meandering windings, and wherein for cutting open a burn-up segment, the current pulse is injected into the two circuit traces that are routed to a selected burn-up segment, and thus, fails to cure this critical deficiency.

Accordingly, it is respectfully submitted that the combination of Shier and Kato does not disclose, or even suggest, all of the features included in claim 15, from which claims 22, and 24 to 28 ultimately depend. As such, it is respectfully submitted that the combination of Shier and Kato does not render unpatentable claims 22, and 24 to 28, which ultimately depend from claim 15.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

V. Rejection of Claim 23 Under 35 U.S.C. § 103(a)

Claim 23 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Shier and U.S. Patent No. 3,639,785 (“Moriyasu”). It is respectfully submitted that the combination of Shier and Moriyasu does not render unpatentable the present claim for at least the following reasons.

Claim 23 ultimately depends from claim 15, as presented. As more fully set forth above, Shier does not disclose, or even suggest, the features of cutting open the burn-up segments by sending energy-controlled current pulses through the burn-up segments, wherein circuit traces are routed to connecting locations of the burn-up segments and the meandering windings, and wherein for cutting open a burn-up segment, the current pulse is injected into the two circuit traces that are routed to a selected burn-up segment. Moriyasu also does not disclose, or even suggest, the features of cutting open the burn-up segments by sending energy-controlled current pulses through the burn-up segments, wherein circuit traces are routed to connecting locations of the burn-up segments and the meandering windings, and wherein for cutting open a burn-up segment, the current pulse is injected into the two circuit traces that are routed to a selected burn-up segment, and thus, fails to cure this critical deficiency.

Accordingly, it is respectfully submitted that the combination of Shier and Moriyasu does not disclose, or even suggest, all of the features included in claim 15, from which claim 23 ultimately depends. As such, it is respectfully submitted that the combination of Shier and Moriyasu does not render unpatentable claim 23, which ultimately depends from claim 15.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

VI. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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